

(1/30/90)

ER PROGRAM DATA ASSESSMENT
SUMMARY REPORT FORM

Batch No. 8912L807 Site Area 3 - 903 Pad
Laboratory Roy F. Weston - Lionville No. of Samples/Matrix 6/Water
SOW # 10/86 (Rev. 2/88) Reviewer Org. TechLaw, Inc.
Sample Numbers TB120789009, SW094009, SW095009, SW093009, SW065009, SW055009

Data Assessment Summary

	VOA	Comments
1. Holding Times	<u>A</u>	<u>Action Item 1</u>
2. GC/MS Tune/Instr. Perf.	<u>V</u>	
3. Calibrations	<u>A</u>	<u>Action Item 2; Comments 1,2</u>
4. Blanks	<u>V</u>	
5. Surrogates	<u>V</u>	
6. Matrix Spike/Dup.	<u>X</u>	<u>Comment 3</u>
7. Other QC	<u>X</u>	<u>Comment 4</u>
8. Internal Standards	<u>V</u>	
9. Compound Identification	<u>X</u>	<u>Comment 5</u>
10. System Performance	<u>X</u>	<u>Comments 6,7</u>
11. Overall Assessment	<u>A</u>	<u>Data acceptable with qualifications.</u>

V = Data had no problems.

A = Data acceptable but qualified due to problems.

R = Data rejected.

X = Problems, but do not affect data.

Data Quality: Data contained in this batch were reviewed and found to be acceptable with qualifications. Acceptable,
qualified data may be used provided that individual values impacted by the "Action Items" listed below are appropriately flagged.
(Refer to attached Results Summary Table.)

REVIEWED FOR CLASSIFICATION

By [Signature]

1 Date 10/25/91

L807/rk31

A-DU04-000073

Action Items: 1) Seven day holding times were exceeded for all samples. The non-detect aromatic values in all samples are estimated and undetected (UJ).

2) 2-Butanone had a %D greater than 50% for the 12/18/89 continuing calibration. The positive 2-Butanone value in TB120789009 is estimated (J) and the non-detect 2-Butanone values in the rest of the samples are rejected (R).

Comments: 1) Chloromethane, Bromomethane, Chloroethane, and Methylene Chloride had %Ds greater than 25% for the 12/18/89 continuing calibration. No action was taken as these compounds were undetected in all samples.

2) The RFW lot number on Form 6A doesn't correspond with the case number. No action was taken.

3) The matrix spike duplicate had one percent recovery and three RPDs above limits. No action was taken.

4) The trip blank, TB120789009, contained Acetone and 2-Butanone.

5) TICs were found in samples TB120789009, SW065009, and SW055009.

6) The chromatograms for all samples had an unusually high baseline. This did not affect the data.

7) A system contaminant was found in all samples.

Note: Data Summary Tables are attached.

Anthony W. Joth
Reviewer Signature

2-7-90
Date

SITE NAME: Area 3 - 903 Pad

CLP VOLATILE ORGANIC ANALYSIS: Low Water

ANALYTICAL RESULTS (ppb)

Sample Location	YBLK89LVB109	TB120789009	SW094009	SW095009	SW083009	SW065009	SW055009	
Sample Number	12/7/89	12/7/89	12/7/89	12/7/89	12/7/89	12/7/89	12/7/89	
Sampling Date	Tripp Blank							
Remarks	Method Blank	DQ	DQ	DQ	DQ	DQ	DQ	
Volatiles	CRQL							
Compound	ug/L (ppb)							
Chloromethane	10	10 U V	10 U V	10 U V	10 U V	10 U V	10 U V	DQ
Bromomethane	10	10 U V	10 U V	10 U V	10 U V	10 U V	10 U V	
Vinyl chloride	10	10 U V	10 U V	10 U V	10 U V	10 U V	10 U V	
Chloroethane	10	10 U V	10 U V	10 U V	10 U V	10 U V	10 U V	
Methylene chloride	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Acetone	10	34 V	10 U V	10 U V	10 U V	10 U V	10 U V	
Carbon disulfide	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
1,1-Dichloroethene	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
1,1-Dichloroethane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
1,2-Dichloroethene (Total)	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Chloroform	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
1,2-Dichloroethane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
2-Butanone	10	74 J A	10 U R	10 U R	10 U R	10 U R	10 U R	
1,1,1-Trichloroethane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Carbon tetrachloride	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Vinyl acetate	10	10 U V	10 U V	10 U V	10 U V	10 U V	10 U V	
Bromodichloromethane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
1,2-Dichloropropane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
cis-1,3-Dichloropropene	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Trichloroethene	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Dibromochloromethane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
1,1,2-Trichloroethane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Benzene	5	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	
trans-1,3-Dichloropropene	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Bromoforn	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
4-Methyl-2-pentanone	10	10 U V	10 U V	10 U V	10 U V	10 U V	10 U V	
2-Hexanone	10	10 U V	10 U V	10 U V	10 U V	10 U V	10 U V	
Tetrachloroethene	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
1,1,2,2-Tetrachloroethane	5	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	
Toluene	5	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	
Chlorobenzene	5	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	
Ethylbenzene	5	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	
Styrene	5	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	
Xylenes (Total)	5	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	
Total Organic Concentration (ppb)	0	110	0	0	5	0	60	

U Indicates the compound was not detected above the Required Quantitation Limit.

J Quantitation is approximate due to limitations identified during the quality control review.

E Exceeds calibration range, dilute & reanalyze.

CRQL Contract Required Quantitation Limit in Micrograms per Liter (ug/L), Parts per billion (ppb).

DQ

V

A

R

Data Qualifier

Valid

Acceptable with qualifications

Rejected

L807L/rk31

ER DEPARTMENT DATA ASSESSMENT
SUMMARY REPORT FORM

Batch No. 8912L807 Site Groundwater Monitoring
Laboratory Roy E. Weston - Lionville No. of Samples/Matrix 10/Water
SOW # 7/87 Reviewer Org. TechLaw, Inc.
Sample Numbers SW094009 (Total & Soluble), SW095009 (Total & Soluble), SW093009 (Total & Soluble), SW065009 (Total & Soluble), SW055009 (Total & Soluble)

Data Assessment Summary

	ICP	AA	Hg	CN	Comments
1. Holding Times	<u>V</u>	<u>V</u>	<u>V</u>	<u>A</u>	<u>Action Item 1</u>
2. Calibrations	<u>A</u>	<u>A</u>	<u>V</u>	<u>V</u>	<u>Action Items 2-3</u>
3. Blanks	<u>A</u>	<u>V</u>	<u>V</u>	<u>V</u>	<u>Action Items 4-9</u>
4. ICP Interference Check Sample	<u>A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>Action Item 10</u>
5. Lab Control Sample Results	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	
6. Duplicate Sample Results	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>Comment 1</u> <u>Action Item 11</u>
7. Matrix Spike Sample Results	<u>X</u>	<u>A</u>	<u>X</u>	<u>X</u>	<u>Comment 1</u>
8. Method of Standard Addition	<u>N/A</u>	<u>V</u>	<u>N/A</u>	<u>N/A</u>	
9. Serial Dilution	<u>X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>Comment 1</u>
10. Sample Verification	<u>X</u>	<u>V</u>	<u>V</u>	<u>V</u>	<u>Comment 2</u>
11. Other QC	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	
12. Overall Assessment	<u>A</u>	<u>A</u>	<u>V</u>	<u>A</u>	<u>Data valid, or</u> <u>acceptable</u> <u>with qualifications</u>

V = Data had no problems.

A = Data acceptable but qualified due to problems.

R = Data rejected.

X = Problems, but do not affect data.

N/A = Not applicable.

Data Quality: Data contained in this batch were reviewed and found to be valid, or acceptable with qualifications. Acceptable, qualified data may be used provided that individual values impacted by the "Action Items" listed below are appropriately flagged.
(Refer to attached Results Summary Tables).

Action Items: 1) All Cyanide non-detect values are estimated and undetected (UJ) because holding times were exceeded.

2) All Lithium values are estimated (J), and non-detects are estimated and undetected (UJ) because a CRDL check sample (CRD) was not run for Lithium.

3) All Arsenic non-detects are estimated and undetected (UJ) because the continuing calibration verification criteria were not met.

4) The Silver and Vanadium values for SW065009 (Total and Soluble), SW055009 (Total and Soluble), the Silver value for SW093009 (Total and Soluble), and the Vanadium value for SW093009 (Soluble) are rejected (R) because of negative bias indicated in the blanks.

5) The Beryllium values for SW095009 (Total), SW093009 (Total), SW055009 (Total), and SW094009 (Soluble) are rejected (R) because of negative bias indicated in the blanks.

6) All Zinc values except SW055009 (Total and Soluble) are estimated and undetected (UJ) because Zinc values >IDL were found in the blanks.

7) The Chromium values for SW093009 (Total and Soluble), SW055009 (Total), and SW065009 (Soluble) are estimated and undetected (UJ) because of Chromium values >IDL found in the blanks.

8) The Antimony values for SW094009 (Total and Soluble), SW095009 (Soluble), and SW065009 (Soluble) are estimated and undetected (UJ) because of Antimony values >IDL found in the blanks.

9) The Vanadium values for SW094009 (Total and Soluble), SW095009 (Total and Soluble), and SW093009 (Total) are estimated and undetected (UJ) because Vanadium values >IDL were found in the blanks.

10) The Manganese values for SW094009 (Total and Soluble) and SW095009 (Total and Soluble) are estimated (J), and the Silver values SW094009 (Total and Soluble) and SW095009 (Total and Soluble) are rejected (R) because of possible Calcium interference indicated in the ICP interference check sample.

11) All Thallium values except SW094009 (Total) are estimated and undetected (UJ) because the post-digestion matrix spike recovery criteria was not met.

Comments: 1) A pre-digestion matrix spike, duplicate, and serial dilution was not run for any analyte in
8912L807.

2) Laboratory did not set the CRDL for Cesium.

Note: Data Summary Tables are attached.

William H. Greise
Reviewer Signature

7/12/90
Date

Sample Location	SW084C008	SW084C009	SW085006	SW083009	SW085009	SW085009	SW085009
Sample Number	12-7-89	12-7-89	12-7-89	12-7-89	12-7-89	12-7-89	12-7-89
Sample Date	Total	Soluble	Total	Soluble	Total	Soluble	Total
Remarks	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Inorganic Analyte	DQ	DQ	DQ	DQ	DQ	DQ	DQ
DL ug/L							
Aluminum Al	84 U V	84 U V	84 U V	84 U V	84 U V	84 U V	84 U V
Antimony Sb	28.8 U A	41.2 U A	22.0 U V	22.0 U V	22.0 U V	22.6 U A	22.0 U V
Arsenic As	2.0 U A	2.0 U A	2.0 U A	2.0 U A	2.0 U A	2.0 U A	2.0 U A
Barium Ba	182 V	160 V	165 V	127 V	132 V	215 V	282 V
Beryllium Be	5 1.0 U V	1.0 U R	1.0 U V	1.0 U R	1.0 U V	1.0 U V	1.0 U V
Cadmium Cd	5 3.0 U V	3.0 U V	3.0 U V	3.0 U V	3.0 U V	3.0 U V	3.0 U V
Calcium Ca	5000 351000 V	338000 V	34200 V	77700 V	84700 V	100000 V	118000 V
Cesium Cs	1000 2500 U V	2500 U V	2500 U V	2500 U V	2500 U V	2500 U V	2500 U V
Chromium Cr	10 2.0 U V	2.0 U V	2.0 U V	2.4 U A	2.9 U A	3.4 U A	3.2 U A
Cobalt Co	50 4.0 U V	4.0 U V	4.0 U V	4.0 U V	4.0 U V	4.0 U V	4.0 U V
Copper Cu	25 5.0 U V	5.0 U V	5.0 U V	8.3 V	5.0 U V	5.0 U V	5.0 U V
Iron Fe	100 47.8 V	44.0 U V	44.0 U V	1810 V	280 V	44.0 U V	54.6 V
Lead Pb	5 3.0 U V	3.0 U V	3.0 U V	3.0 U V	3.0 U V	3.0 U V	3.0 U V
Lithium Li	100 368 J A	361 J A	365 J A	100 U A	100 U A	100 U A	128 J A
Magnesium Mg	5000 101000 V	97800 V	98200 V	20000 V	21800 V	15200 V	27500 V
Manganese Mn	15 5.9 J A	5.4 J A	6.5 J A	764 V	815 V	7.5 V	286 V
Mercury Hg	0.2 20 V	20 U V	20 U V	20 U V	20 U V	20 U V	20 U V
Molybdenum Mo	200 100 U V	100 U V	100 U V	100 U V	100 U V	100 U V	100 U V
Nickel Ni	40 7.0 U V	11.7 V	8.8 V	7.0 V	11.1 V	18.4 V	12.3 V
Potassium K	5000 66700 V	64900 V	64400 V	2420 V	2540 V	1680 V	1640 V
Selenium Se	5 13.8 V	9.1 V	12.8 V	14.2 V	2.0 U V	2.0 U V	2.0 U V
Silver Ag	10 3.0 U R	3.0 U R	3.0 U R	3.0 U R	3.0 U R	3.0 U R	3.0 U R
Sodium Na	5000 482000 V	467000 V	46400 V	468000 V	49000 V	23400 V	79200 V
Strontium Sr	200 3410 V	3340 V	3300 V	546 V	808 V	532 V	914 V
Thallium Tl	10 4.0 U V	4.0 U A	4.0 U A	4.0 U A	4.0 U A	4.0 U A	4.0 U A
Tin Sn	200 100 U V	100 U V	100 U V	100 U V	100 U V	100 U V	100 U V
Vanadium V	60 29.0 U A	23.9 U A	30.6 U A	23.3 U A	5.0 U R	5.0 U R	5.0 U R
Zinc Zn	20 16.6 U A	16.6 U A	13.1 U A	24.5 U A	26.5 U A	8.9 U A	1720 V
Cyanide	10 5.0 U A	NR	5.0 U A	NR	NR	NR	NR

E Exceeds calibration range

Exceeds calibration range

Quantitation is appropriate due to limitations identified during the quality control review

10 Detection | mit dem Mikroskop (von

DL Detection Limit
N/A Not measured

DQ Data Qualifier

V. Validity

Accompany with applications

A **Protected**

STOCKTON

CFL 120789 001

WESTON Analytics Use Only
89121807

Custody Transfer Record/Lab Work Request

Client: Rockwell (Rocky Flats)
Work Order: 2029 33 04
Date Rec'd: 12/9/89 Date Due: 1/23/90
RFW Contact: Janeil Bergman
Client Contact/Phone: (303) 980 6800

WA Use Only Lab ID	Client ID/Description
1	TR 120789009
2	SW094009
3	SW095009
4	SW093009
5	SW095009
6	SW095009
7	SW094009
8	SW095009
9	SW093009
10	SW095009
11	SW095009

Matrix: W - Water DS - Drum Solids X - Other
S - Soil O - Oil DL - Drum Liquids
SE - Sediment A - Air F - Fish
SO - Solid W - Wipe L - EP/TCLP Leachate

Item/Reason	Relinquished by	Received by	Date
1	[Signature]	[Signature]	12/9/89
2	[Signature]	[Signature]	12/9/89
3	[Signature]	[Signature]	12/9/89
4	[Signature]	[Signature]	12/9/89
5	[Signature]	[Signature]	12/9/89
6	[Signature]	[Signature]	12/9/89
7	[Signature]	[Signature]	12/9/89
8	[Signature]	[Signature]	12/9/89
9	[Signature]	[Signature]	12/9/89
10	[Signature]	[Signature]	12/9/89
11	[Signature]	[Signature]	12/9/89

Refrigerator#	#/Type Container	Volume	Preservative	ANALYSES REQUESTED	Matrix	Date Collected
1	191	1/21	1/21	1	W	12-7-89
2	40ml	1/21	1/21	4	W	12-7-89
3	40ml	1/21	1/21	5	W	12-7-89
4	40ml	1/21	1/21	6	W	12-7-89
5	40ml	1/21	1/21	7	W	12-7-89
6	40ml	1/21	1/21	8	W	12-7-89
7	40ml	1/21	1/21	9	W	12-7-89
8	40ml	1/21	1/21	10	W	12-7-89
9	40ml	1/21	1/21	11	W	12-7-89
10	40ml	1/21	1/21	12	W	12-7-89
11	40ml	1/21	1/21	13	W	12-7-89
12	40ml	1/21	1/21	14	W	12-7-89
13	40ml	1/21	1/21	15	W	12-7-89
14	40ml	1/21	1/21	16	W	12-7-89
15	40ml	1/21	1/21	17	W	12-7-89
16	40ml	1/21	1/21	18	W	12-7-89
17	40ml	1/21	1/21	19	W	12-7-89
18	40ml	1/21	1/21	20	W	12-7-89
19	40ml	1/21	1/21	21	W	12-7-89
20	40ml	1/21	1/21	22	W	12-7-89
21	40ml	1/21	1/21	23	W	12-7-89
22	40ml	1/21	1/21	24	W	12-7-89
23	40ml	1/21	1/21	25	W	12-7-89
24	40ml	1/21	1/21	26	W	12-7-89
25	40ml	1/21	1/21	27	W	12-7-89
26	40ml	1/21	1/21	28	W	12-7-89
27	40ml	1/21	1/21	29	W	12-7-89
28	40ml	1/21	1/21	30	W	12-7-89
29	40ml	1/21	1/21	31	W	12-7-89
30	40ml	1/21	1/21	32	W	12-7-89
31	40ml	1/21	1/21	33	W	12-7-89
32	40ml	1/21	1/21	34	W	12-7-89
33	40ml	1/21	1/21	35	W	12-7-89
34	40ml	1/21	1/21	36	W	12-7-89
35	40ml	1/21	1/21	37	W	12-7-89
36	40ml	1/21	1/21	38	W	12-7-89
37	40ml	1/21	1/21	39	W	12-7-89
38	40ml	1/21	1/21	40	W	12-7-89
39	40ml	1/21	1/21	41	W	12-7-89
40	40ml	1/21	1/21	42	W	12-7-89
41	40ml	1/21	1/21	43	W	12-7-89
42	40ml	1/21	1/21	44	W	12-7-89
43	40ml	1/21	1/21	45	W	12-7-89
44	40ml	1/21	1/21	46	W	12-7-89
45	40ml	1/21	1/21	47	W	12-7-89
46	40ml	1/21	1/21	48	W	12-7-89
47	40ml	1/21	1/21	49	W	12-7-89
48	40ml	1/21	1/21	50	W	12-7-89
49	40ml	1/21	1/21	51	W	12-7-89
50	40ml	1/21	1/21	52	W	12-7-89
51	40ml	1/21	1/21	53	W	12-7-89
52	40ml	1/21	1/21	54	W	12-7-89
53	40ml	1/21	1/21	55	W	12-7-89
54	40ml	1/21	1/21	56	W	12-7-89
55	40ml	1/21	1/21	57	W	12-7-89
56	40ml	1/21	1/21	58	W	12-7-89
57	40ml	1/21	1/21	59	W	12-7-89
58	40ml	1/21	1/21	60	W	12-7-89
59	40ml	1/21	1/21	61	W	12-7-89
60	40ml	1/21	1/21	62	W	12-7-89
61	40ml	1/21	1/21	63	W	12-7-89
62	40ml	1/21	1/21	64	W	12-7-89
63	40ml	1/21	1/21	65	W	12-7-89
64	40ml	1/21	1/21	66	W	12-7-89
65	40ml	1/21	1/21	67	W	12-7-89
66	40ml	1/21	1/21	68	W	12-7-89
67	40ml	1/21	1/21	69	W	12-7-89
68	40ml	1/21	1/21	70	W	12-7-89
69	40ml	1/21	1/21	71	W	12-7-89
70	40ml	1/21	1/21	72	W	12-7-89
71	40ml	1/21	1/21	73	W	12-7-89
72	40ml	1/21	1/21	74	W	12-7-89
73	40ml	1/21	1/21	75	W	12-7-89
74	40ml	1/21	1/21	76	W	12-7-89
75	40ml	1/21	1/21	77	W	12-7-89
76	40ml	1/21	1/21	78	W	12-7-89
77	40ml	1/21	1/21	79	W	12-7-89
78	40ml	1/21	1/21	80	W	12-7-89
79	40ml	1/21	1/21	81	W	12-7-89
80	40ml	1/21	1/21	82	W	12-7-89
81	40ml	1/21	1/21	83	W	12-7-89
82	40ml	1/21	1/21	84	W	12-7-89
83	40ml	1/21	1/21	85	W	12-7-89
84	40ml	1/21	1/21	86	W	12-7-89
85	40ml	1/21	1/21	87	W	12-7-89
86	40ml	1/21	1/21	88	W	12-7-89
87	40ml	1/21	1/21	89	W	12-7-89
88	40ml	1/21	1/21	90	W	12-7-89
89	40ml	1/21	1/21	91	W	12-7-89
90	40ml	1/21	1/21	92	W	12-7-89
91	40ml	1/21	1/21	93	W	12-7-89
92	40ml	1/21	1/21	94	W	12-7-89
93	40ml	1/21	1/21	95	W	12-7-89
94	40ml	1/21	1/21	96	W	12-7-89
95	40ml	1/21	1/21	97	W	12-7-89
96	40ml	1/21	1/21	98	W	12-7-89
97	40ml	1/21	1/21	99	W	12-7-89
98	40ml	1/21	1/21	100	W	12-7-89
99	40ml	1/21	1/21	101	W	12-7-89
100	40ml	1/21	1/21	102	W	12-7-89
101	40ml	1/21	1/21	103	W	12-7-89
102	40ml	1/21	1/21	104	W	12-7-89
103	40ml	1/21	1/21	105	W	12-7-89
104	40ml	1/21	1/21	106	W	12-7-89
105	40ml	1/21	1/21	107	W	12-7-89
106	40ml	1/21	1/21	108	W	12-7-89
107	40ml	1/21	1/21	109	W	12-7-89
108	40ml	1/21	1/21	110	W	12-7-89
109	40ml	1/21	1/21	111	W	12-7-89
110	40ml	1/21	1/21	112	W	12-7-89
111	40ml	1/21	1/21	113	W	12-7-89
112	40ml	1/21	1/21	114	W	12-7-89
113	40ml	1/21	1/21	115	W	12-7-89
114	40ml	1/21	1/21	116	W	12-7-89
115	40ml	1/21	1/21	117	W	12-7-89
116	40ml	1/21	1/21	118	W	12-7-89
117	40ml	1/21	1/21	119	W	12-7-89
118	40ml	1/21	1/21	120	W	12-7-89
119	40ml	1/21	1/21	121	W	12-7-89
120	40ml	1/21	1/21	122	W	12-7-89
121	40ml	1/21	1/21	123	W	12-7-89
122	40ml	1/21	1/21	124	W	12-7-89
123	40ml	1/21	1/21	125	W	12-7-89
124	40ml	1/21	1/21	126	W	12-7-89
125	40ml	1/21	1/21	127	W	12-7-89
126	40ml	1/21	1/21	128	W	12-7-89
127	40ml	1/21	1/21	129	W	12-7-89
128	40ml	1/21	1/21	130	W	12-7-89
129	40ml	1/21	1/21	131	W	12-7-89
130	40ml	1/21	1/21	132	W	12-7-89
131	40ml	1/21	1/21	133	W	12-7-89
132	40ml	1/21	1/21	134	W	12-7-89
133	40ml	1/21	1/21	135	W	12-7-89
134	40ml	1/21	1/21	136	W	12-7-89
135	40ml	1/21	1/21	137	W	12-7-89
136	40ml	1/21	1/21	138	W	12-7-89
137	40ml	1/21	1/21	139	W	12-7-89
138	40ml	1/21	1/21	140	W	12-7-89
139	40ml	1/21	1/21	141	W	12-7-89
140	40ml	1/21	1/21	142	W	12-7-89
141	40ml	1/21	1/21	143	W	12-7-89
142	40ml	1/21	1/21	144	W	12-7-89
143	40ml	1/21	1/21	145	W	12-7-89
144	40ml	1/21	1/21	146	W	12-7-89
145	40ml	1/21	1/21	147	W	12-7-89
146	40ml	1/21	1/21	148	W	12-7-89
147	40ml	1/21	1/21	149	W	12-7-89
148	40ml	1/21	1/21	150	W	12-7-89
149	40ml	1/21	1/21	151	W	12-7-89
150	40ml	1/21	1/21	152	W	12-7-89
151	40ml	1/21	1/21	153	W	12-7-89
152	40ml	1/21	1/21	154	W	12-7-89
153	40ml	1/21	1/21	155	W	12-7-89
154	40ml	1/21	1/21	156	W	12-7-89
155	40ml	1/21	1/21	157	W	12-7-89
156	40ml	1/21	1/21	158	W	12-7-89
157	40ml	1/21	1/21	159	W	12-7-89
158	40ml	1/21	1/21	160	W	12-7-89
159	40ml	1/21	1/21	161	W	12-7-89
160	40ml	1/21	1/21	162	W	12-7-89
161	40ml	1/21	1/21	163	W	12-7-89
162	40ml	1/21	1/21	164	W	12-7-89
163	40ml	1/21	1/21	165	W	12-7-89
164	40ml	1/21	1/21	166	W	12-7-89
165	40ml	1/21	1/21	167	W	12-7-89
166	40ml	1/21	1/21	168	W	12-7-89
167	40ml	1/21	1/21	169	W	12-7-89
168	40ml	1/21	1/21	170	W	12-7-89
169	40ml	1/21	1/21	171	W	12-7-89
170	40ml	1/21	1/21	172	W	12-7-89
171	40ml	1/21	1/21	173	W	12-7-89
172	40ml	1/21	1/21	174	W	12-7-89
173	40ml	1/21	1/21	175	W	12-7-89
174	40ml	1/21	1/21	176	W	12-7-89
175	40ml	1/21	1/21	177	W	12-7-89
176	40ml	1/21	1/21	178	W	12-7-89
177	40ml	1/21	1/21	179	W	12-7-89
178	40ml	1/21	1/21	180	W	12-7-89
179	40ml	1/21	1/21	181	W	12-7-89
180	40ml	1/21	1/21	182	W	12-7-89
181	40ml	1/21	1/21	183	W	12-7-89
182	40ml	1/21	1/21	184	W	12-7-89
183	40ml	1/21	1/21	185	W	12-7-89
184	40ml	1/21	1/21	186	W	12-7-89
185	40ml	1/21	1/21	187	W	12-7-89
186	40ml	1/21	1/21	188	W	12-7-89
187	40ml	1/21	1/21	189	W	12-7-89
188	40ml	1/21	1/21	190	W	12-7-89
189	40ml	1/21	1/21	191	W	12-7-89
190	40ml	1/21	1/21	192	W	12-7-89
191	40ml	1/21	1/21	193	W	12-7-89
192	40ml	1/21	1/21	194	W	12-7-89
193	40ml	1/21	1/21	195	W	12-7-89
194	40ml	1/21	1/21	196	W	12-7-89
195	40ml	1/21	1/21	197	W	12-7-89
196	40ml	1/21	1/21	198	W	12-